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ANIMAL SPECIES SPOTTED IN TELANGANA.

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Abstract: **Globally, approximately 1.8 million species have been catalogued so far, of which animals comprise about one million. However, countless species remain undiscovered. India is home to around 81,000 animal species, representing 6.4% of the world's animal population and ranking sixth in global biodiversity. Insects are the most dominant group in Indian biodiversity, with 57,000 species out of the total 81,000 animal species. Telangana, a relatively new state in India, is endowed with significant biodiversity, thanks to its rivers, streams, ponds, lakes, deciduous forests, red and black soils, and semi-arid climate. Several insects observed in Telangana also occur in various regions worldwide. In this study, I have identified 11 lesser-known species, detailed in this presentation.**
These include Ethyrhynchus, Aegocera venulia, Arugisa latiorella, Gryllus bimaculatus, Heliocopris Bucephalus, Hierodula membranacea, Acherontia Styx, Amata passalis, Ramphotyphlops braminus, Paradoxurus jerdoni, and Ablephanus pannonicus. Four species belong to Lepidoptera, with representatives also from Orthoptera, Coleoptera, Hemiptera, Mantodea, Squamata, and Carnivora. These species are mainly observed during the monsoon, from June to September. Notably, Ramphotyphlops braminus displays parthenogenesis, with females predominating, and is an egg-laying snake.

Keywords: **Ramphotyphlops, Paradoxurus, Ablephanus, Gryllus, Amata.**

I. INTRODUCTION:

All living beings in our environment have unique characteristics, relying on one another for nourishment or shelter. Any harm or loss to one organism will inevitably affect others. Species living in the same ecosystem show great diversity in their behaviours, habitats, physical forms, and genetic makeup. Studying biodiversity helps us maintain ecological balance in specific areas, which is essential for sustainable socio-economic development. Telangana, situated in southern India, is recognized for its remarkable biodiversity, especially among invertebrates. Its water bodies, semi-arid climate, and dry deciduous forests support a diverse range of life forms. The majority of these species are found in abundance during the rainy months, usually from June to September. Telangana is home both to species native to southern India and to species found in other countries. Species such as Scutigera, which have evolutionary importance, have also been spotted in Telangana.

Topic Importance:
Animals form the backbone of ecosystems, and learning about them offers critical insights into environmental processes.

Existing Knowledge:
Previous research has identified a variety of invertebrate and vertebrate species in Telangana, including those with evolutionary relevance and some considered as pests.

Knowledge Gap:
Despite the rich invertebrate diversity in Telangana, much remains unknown concerning their evolutionary backgrounds and ecological impacts.

Rationale:
Studying the evolutionary heritage and environmental importance of Telangana's invertebrates and vertebrates is crucial for conserving the state's biodiversity and protecting natural habitats.

Research Question:
What is the evolutionary history and ecological role of invertebrate and vertebrate species in Telangana, and how can this knowledge inform environmental protection strategies?

Aim/Objective:
The study aims to catalogue Telangana's fauna and explore the evolutionary paths and ecological functions of its animal species.

Hypothesis:
It is proposed that Telangana's invertebrates possess complex evolutionary histories and play vital roles in ecosystem functioning, and their protection is central to conserving biodiversity and safeguarding the environment.

Methodology:
The observed species were photographed, enabling detailed examination of their physical and anatomical features, as well as their habits and habitats. Image-based searches through Google were instrumental in identifying these species by comparing them with existing records. Taxonomic classification was carried out using morphological and anatomical criteria.

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1. **Ethyrhynchus (Predatory Stink Bug)**
Phylum: Arthropoda, Class: Insecta, Order: Hemiptera, Family: Pentatomidae, Genus: Euthyrhynchus
Collection Site: Government Degree College, Peddapalli, Telangana, July 2016.
This vibrant predator bug, like other true bugs, possesses a beak for feeding and injects digestive enzymes to immobilize prey before feeding. These bugs prey on insect pests that damage plants.

2. Aegocera venulia (Moth)
Phylum: Arthropoda, Class: Insecta, Order: Lepidoptera, Family: Noctuidae,
Genus: Aegocera, Species: venulia
This species has palpi covered with long hair on the second joint and distal-thickened antennae. Its wingspan is about 33 mm. Males lack costal vesicles. Forewings display a continuous white streak with an indentation and a nearby black spot, as well as a red edge. The cilia of both wings are white.

3. Arugisa latiorella (Moth)
Phylum: Arthropoda, Class: Insecta, Order: Lepidoptera, Family: Erebida,
Genus: Arugisa, Species: latiorella
Location: Government Degree College, Peddapalli, July 2016.
First documented by Francis Walker in 1863, this moth has a wingspan ranging from 18–22 mm. Adults are present nearly year-round, and the larvae feed on both live and decaying Kentucky bluegrass

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4. Gryllus bimaculatus
Phylum: Arthropoda, Class: Insecta, Order: Orthoptera, Family: Gryllidae,
Genus: Gryllus, Species: bimaculatus
Location: Bhongir, Telangana, September 2016
Known as the two-spotted cricket, this nocturnal species is notable for its nighttime chirping and two small dots at the wings' base. It is popular as feed for carnivorous pets and zoo animals due to its ease of cultivation.

5. Heliocopris bucephalus
Phylum: Arthropoda, Class: Insecta, Order: Coleoptera, Family: Scarabaeidae,
Genus: Heliocopris, Species: bucephalus
Location: Bhongir, Telangana, September 2016.
This beetle is black with reddish elytra and underside, featuring coarse reddish hairs along certain body parts. Its robust, almost square shape, grooved head and pronotum, and smooth, shiny elytra are distinctive. Sexual dimorphism is seen in head and pronotum structure.

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6. Hierodula membranacea (Giant Asian Mantis)
Phylum: Arthropoda, Class: Insecta, Order: Mantodea, Family: Mantididae,
Genus: Hierodula, Species: membranacea
Location**:** Bhongir, Telangana, September 2016
This large mantis species grows over 10 cm long, with males being smaller. Coloration varies from pinkish-white to green and can change with each moult. The colour trait is not genetically fixed.

7. Acherontia styx
Phylum: Arthropoda, Class: Insecta, Order: Lepidoptera, Family: Sphingidae,
Genus: Acherontia, Species: styx
Location: Bhongir, Telangana, July 2016
This large brown moth is known for causing significant plant defoliation. Its thorax has a skull-like marking, and the abdomen is marked with violet and yellow bands. The dark forewings contrast with the yellowish hindwings.

8. Amata passalis (Tiger/Indian Wasp Moth)
Phylum: Arthropoda, Class: Insecta, Order: Lepidoptera, Family: Arctiidae,
Genus: Amata, Species: passali
Location: Bhongir, Nalgonda District, Telangana, August 2016
Commonly referred to as the wasp moth, this species is widespread in both rural and urban parts of Telangana. Its body is banded yellow and black, and the wings are dotted with white spots.

9. Ramphotyphlops braminus (Blind Snake)
Phylum: Chordata, Class: Reptilia, Order: Squamata, Family: Typhlopidae,
Genus: Ramphotyphlops, Species: braminus
Native to Southeast Asia, this small, shiny brown snake measures 2.5–6.5 inches, with tiny eyes hidden under scales. It inhabits moist soil, logs, and gardens and feeds primarily on larvae and termites. Females are dominant, and the species reproduces via parthenogenesis and lays eggs.

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10. Paradoxurus jerdoni (Asian Palm Civet)
Phylum: Chordata, Class: Mammalia, Order: Carnivora, Family: Viverridae, Genus: Paradoxurus, Species: jerdoni
Location: Peddapalli, June 2016
Though primarily found in the Western Ghats, this brown civet also inhabits Telangana. It is nocturnal, feeds mainly on fruit, and can be distinguished by facial markings, including a white patch above the eyes and white stripes below. These animals are known for noisy nighttime activities and strong-smelling excretions.

11. Ablephanus pannonicus (Asian Snake-eyed Skink)
Phylum: Chordata, Class: Reptilia, Order: Squamata, Family: Scincidae, Genus: Ablephanus, Species: pannonicus
Location: Karimnagar, August 2016
This small, slender skink has smooth scales and lacks movable eyelids, instead bearing a transparent covering over its eyes. Its colour is typically brown with pale spots, and the underside is silvery. It is mostly active during the day and inhabits open grasslands and rocky areas across a wide geographical range.

List of Animal Species Observed in Telangana
Recorded by S. Srinath Patel, Assistant Professor of Zoology, BJR Govt. Degree College (A), Narayanaguda, Hyderabad.

Sl. No.	Name of Animal	Order	Chordata/Non-Chordata
01	Ethyrhynchus	Hemiptera	NON-CHORDATA
02	Aegocera venulia	Lepidoptera	NON-CHORDATA
03	Arugisa latiorella	Lepidoptera	NON-CHORDATA
04	Gryllus bimaculatus	Orthoptera	NON-CHORDATA
05	Heliocopris bucephalus	Coleoptera	NON-CHORDATA
06	Hierodula membranacea	Mantodea	NON-CHORDATA
07	Acherontia styx	Lepidoptera	NON-CHORDATA
08	Amata passalis	Lepidoptera	NON-CHORDATA
09	Ramphotyphlops braminus	Squamata	CHORDATA
10	Paradoxurus jerdoni	Carnivora	CHORDATA
11	Ablephanus pannonicus	Squamata	CHORDATA

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